I. Remarks

Claims 1-21 and 23-25 are currently pending. Claims 1-6, 12-21, and 23-24 stand withdrawn pursuant to a Restriction Requirement. Claims 7-11 and 25 are under examination on their merits.

In compliance with 37 C.F.R. § 1.121, Applicants hereby submit a corrected version of the non-compliant section of the response filed on August 23, 2005. The non-compliant section was the amendments to the claims section; a corrected amendments to the claims section is submitted herein.

II. Conclusion

No fee is deemed necessary in connection with the filing of this communication. However, if any fee is required, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 07-1074.

Respectfully submitted,

12/29/05
Date

Jennifer D. Tousignant
Agent for Applicants
Registration No. 54,498
Telephone: (508) 270-2499
Facsimile: (508) 872-5415

GENZYME CORPORATION
15 Pleasant Street Connector
P.O. Box 9322
Framingham, Massachusetts 01701-9322

III. Claim Amendments under 37 C.F.R. § 1.121

1. (Withdrawn) A method for inducing an immune response to an endogenous antigen in a subject comprising delivering a cytotoxic agent,

wherein said cytotoxic agent is an effective amount of one or more of herpes simplex virus thymidine kinase (HSV-tk), gancicolvir, or a rejection antigen, that stimulates *in vivo* loading of an endogenous antigen,

wherein said endogenous antigen is a tumor associated antigen or a viral antigen, into an antigenic binding protein (APBP) molecule, wherein said APBP molecule is selected the group consisting of a heat shock protein (HSP), a soluble major histocompatibility complex (MHC) class I molecule, an antigen presenting matrix, a multimer of soluble MHC class I molecules and an antibody engineered to bind antigen peptides, under conditions so that the endogenous antigen is presented to a T cell and the agent induces lysis of said target cell.

2. (Withdrawn) A method for inducing lysis of a target cell in a subject, comprising the steps of:

a. inducing an immune response to an exogenous rejection antigen in the subject, comprising (i)delivering to the subject an effective amount of a composition comprising the exogenous rejection antigen that presents the exogenous rejection antigen on the cell surface, or (ii)delivering to the subject an effective amount of an immune effector cell population educated with the exogenous rejection antigen; and

b. delivering to a target cell, wherein the target cell is a tumor cell or a virally infected cell, in the subject an effective amount of a polynucleotide encoding the exogenous antigen, thereby inducing lysis of the target cell in the subject.

3. (Withdrawn) The method of claim 2 further comprising delivering an effective amount of an antigen presenting cell recruitment factor.

4. (Withdrawn) A fusion polypeptide comprising a T cell antigen presenting domain fused to an oligomerization domain.

5. (Withdrawn) The fusion polypeptide of claim 4, wherein the T cell antigen presenting domain comprises a plurality of immunoglobulin fold domains of an MHC class I molecule.

6. (Withdrawn) The fusion polypeptide of claim 4 wherein the oligomerization domain is selected from the group consisting of a peptide mimetic of a ligand, and a self-assembling protein.

7. (Currently amended) An isolated polynucleotide comprising a nucleic acid sequence encoding a self-assembling fusion polypeptide wherein said fusion polypeptide

(i) comprises a T cell antigen presenting domain of an MHC molecule fused to a leucine zipper domain ~~is capable of forming a stable homomultimer by self-assembly of the leucine zipper domain~~ and,

(ii) ~~comprises a T cell antigen presenting domain of an MHC molecule fused to a leucine zipper domain~~ is capable of forming a stable homomultimer by self-assembly of the leucine zipper domain.

8. (Original) A gene delivery vehicle comprising the polynucleotide of claim 7.

9. (Original) A host cell comprising the polynucleotide of claim 7.

10. (Previously presented) A host cell comprising the polypeptide expressed from the polynucleotide of claim 7.

11. (Previously presented) A recombinant system comprising:

(i) a first polynucleotide comprising a nucleic acid sequence encoding a fusion polypeptide, wherein said fusion polypeptide comprises a T cell antigen presenting domain of an MHC molecule fused to a leucine zipper domain, and

(ii) a second polynucleotide comprising a nucleic acid sequence encoding T cell epitope which binds specifically to the antigen presenting domain of the fusion polypeptide.

12. (Withdrawn) A method of producing an antigen presenting multimer comprising expressing a recombinant system comprising the isolated polynucleotide of claim 7 and a second polynucleotide that encodes a T cell epitope, said T cell epitope selected from the group consisting of a tumor cell antigen, a pathogenic antigen, and a self-antigen, which binds specifically to the antigen presenting domain of the fusion polypeptide, under conditions which allow the formation of antigen presenting multimers and isolating the multimer.

13. (Withdrawn) A method of detecting an antigen specific T cell comprising contacting peripheral blood lymphocytes with antigen presenting multimers of claim 12 under conditions which allow antigen specific binding to T cells, and detecting the multimer-T cell complex.

14. (Withdrawn) A method of isolating an antigen specific T cell comprising purifying the antigen specific T cells of claim 13.

15. (Withdrawn) The T cell isolated by the method of claim 14.

16. (Withdrawn) A method of expanding a population of antigen specific T cells comprising culturing the cell of claim 15.

17. (Withdrawn) The T cell population expanded by the method of claim 16.

18. (Withdrawn) A method of enhancing an immune response in a subject comprising administering to the subject an expanded population of antigen specific T cells of claim 17.

19. (Withdrawn) An isolated polynucleotide comprising a nucleic acid sequence encoding a fusion polypeptide, wherein said fusion polypeptide comprises:

a T cell antigen presenting domain fused to an oligomerization domain, wherein said oligomerization domain:

(a) will not bind to itself and,

(b) is capable of non-covalently binding to a multivalent platform molecule that has multiple binding sites, and

wherein the combination of said fusion polypeptide and the multivalent platform molecule form a stable multimer.

20. (Withdrawn) The isolated polynucleotide of claim 19, wherein the oligomerization domain is selected from the group consisting of a ligand which binds to a receptor molecule, a peptide mimetic of a ligand, and a substrate binding domain.

21. (Withdrawn) The isolated polynucleotide of claim 20, wherein the substrate binding domain is selected from the group consisting of a peptide mimetic of biotin and a heparin binding domain.

22. (Canceled)

23. (Withdrawn) A gene delivery vehicle comprising the polynucleotide of claim 19.

24. (Withdrawn) A host cell comprising the polynucleotide of claim 19.

25. (Previously presented) A recombinant system comprising:

(i) a first polynucleotide comprising a nucleic acid sequence encoding a fusion polypeptide, wherein said fusion polypeptide comprises a T cell antigen presenting domain of an MHC molecule fused to an oligomerization domain comprising a leucine zipper domain, and

(ii) a second polynucleotide comprising a nucleic acid sequence encoding T cell epitope which binds specifically to the antigen presenting domain of the fusion polypeptide.